IN THE CLAIMS

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please **AMEND** claims 1, 3-10, and 12-20, as follows:

1. (CURRENTLY AMENDED) A two-dimensional code extraction method comprising:

inputting image data;

scanning said input image data in a square block unit of MxN pixels (M and N are positive integers);

detecting blocks that satisfy specific conditions from said scanned blocks;

detecting ~~a region~~ one or more two-dimensional code regions, each two-dimensional code region comprising ~~the maximum~~ a number of neighboring and contiguous blocks from among said detected blocks; and

extracting ~~said detected region as the two-dimensional code region~~ one or more two-dimensional codes from among the detected two-dimensional code regions.

2. (ORIGINAL) The two-dimensional code extraction method according to claim 1, wherein a block that includes a ratio of white pixels and black pixels that falls within a specific range is detected as a block satisfying said specific conditions.

3. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, wherein a block that includes a ratio between transition points of pixels within ~~the~~ horizontal lines or vertical lines of the block and ~~the~~a total number of pixels of the block that falls within a specific range is detected as a block satisfying said specific conditions.

4. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, wherein a block in which variation of a vertical or horizontal projection of ~~the~~ black pixels included in each ~~of the lines~~line in the ~~blocks fall~~block falls within a specific range is detected as a block satisfying said specific conditions.

5. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, further comprising:

detecting a two-dimensional code region ~~including specific numbers of blocks from said detected region~~ comprising ~~the~~a maximum number of detected neighboring and contiguous blocks from among the detected two-dimensional code regions~~; and determining said detected region as a two-dimensional code region~~.

6. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, further comprising:

scanning ~~said~~ a detected two-dimensional code region from a point within said two-dimensional code region block by block having a predetermined size upward, downward, to the right and to the left of said point;

detecting a position such that a number of black pixels within said scanned block is less than a predetermined value; and

extracting a square area including said detected position ~~as a~~ as the two-dimensional code region.

7. (CURRENTLY AMENDED) A two-dimensional code extraction method according to claim 1, further comprising:

calculating average distance between pairs of black pixels within said scanned blocks; and

extracting ~~said~~a scanned block as a detected block satisfying said specific conditions, ~~two-dimensional code~~ when a determination is made that said calculated average distance exceeds a predetermined value.

8. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, further comprising:

determining an angle of inclination of ~~the~~a detected two-dimensional code region; and

correcting ~~for~~ the angle of inclination, if the angle of inclination exceeds a specific value.

9. (CURRENTLY AMENDED) The two-dimensional code extraction method according to claim 1, further comprising:

detecting ~~the~~ a two-dimensional code region comprising ~~from~~ a maximum number of detected contiguous blocks from among the detected two-dimensional code regions.

10. (CURRENTLY AMENDED) A computer-readable medium storing a program which, when executed by a computer, causes the computer to execute a two-dimensional code extraction method comprising:

inputting image data;

scanning said input image data in a square block unit of MxN pixels (M and N are positive integers);

detecting blocks that satisfy specific conditions from said scanned blocks;

detecting ~~a region~~ one or more two-dimensional code regions, each two-dimensional code region comprising ~~the maximum~~ a number of neighboring and contiguous blocks from among said detected blocks; and

extracting ~~said detected region as the two-dimensional code region~~ one or more two-dimensional codes from among the detected two-dimensional code regions.

11. (ORIGINAL) The computer-readable medium according to claim 10, wherein a block that includes a ratio of white pixels and black pixels that falls within a specific range is detected as a block satisfying said specific conditions.

12. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, wherein a block that includes a ratio between transition points of pixels within ~~the~~ horizontal lines or vertical lines of the block and ~~the~~ a total number of pixels of the block that falls within a specific range is detected as a block satisfying said specific conditions.

13. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, wherein a block in which variation of a vertical or horizontal projection of ~~the~~ black pixels included in each ~~of the lines~~line in the ~~blocks fall~~block falls within a specific range is detected a block satisfying said specific conditions.

14. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

detecting a two-dimensional code region ~~including specific numbers of blocks from said detected region~~ comprising ~~the~~a maximum number of detected neighboring and contiguous blocks from among the detected two-dimensional code regions~~; and determining said detected region as a two-dimensional code region~~.

15. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

scanning ~~said~~ a detected two-dimensional code region from a point within said two-dimensional code region block by block having a predetermined size upward, downward, to the right and to the left of said point;

detecting a position such that a number of black pixels within said scanned block is less that a predetermined value; and

extracting a square area including said detected position ~~as a~~ as the two-dimensional code region.

16. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

calculating average distance between pairs of black pixels within said scanned blocks; and

extracting ~~said~~a scanned block as a detected block satisfying said specific conditions, ~~two-dimensional code~~ when a determination is made that said calculated average distance exceeds a predetermined value.

17. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

determining an angle of inclination of ~~the~~a detected two-dimensional code region; and

correcting ~~for~~ the angle of inclination, if the angle of inclination exceeds a specific value.

18. (CURRENTLY AMENDED) The computer-readable medium according to claim 10, further comprising:

detecting ~~the~~ a two-dimensional code region comprising ~~from~~ a maximum number of detected contiguous blocks from among the detected two-dimensional code regions.

19. (CURRENTLY AMENDED) An apparatus ~~for~~ extracting two-dimensional code from ~~a input~~an input document, comprising:

an image ~~scanning unit for~~scanner scanning the document, and outputting input image data; and

a ~~processing unit,~~programmed computer processor connected to said image ~~scanning unit, for processing~~ scanner and controlling the apparatus according to a two-dimensional code extraction process, ~~by~~comprising:

scanning said input image data in a square block unit of MxN pixels (M and N are positive integers),

detecting blocks that satisfy specific conditions from said scanned blocks,

detecting ~~a region~~ one or more two-dimensional code regions, each two-dimensional code region comprising ~~the maximum~~ a number of neighboring and contiguous blocks from among said detected blocks, and

extracting ~~said detected region~~one or more two-dimensional codes from among the detected two-dimensional code regions.

20. (CURRENTLY AMENDED) The apparatus ~~for~~ extracting two-dimensional code according to claim 19, further comprising means for reading information from a computer-readable medium ~~contains~~containing computer software for said two-dimensional code extraction process.